

Q2BYG808M

Stepper Driver

User Manual



ADTECH 众为兴

Adtech (Shenzhen) Technology Co., LTD

Address: F5, Tianxia IC Industrial Park, Yiyuan Rd, Nanshan
District, Shenzhen city, China P.C: 518052

TEL: +86-755-260 99116 FAX: +86-755-2672 2718

Website://www.machine-controller.com

Copyright Warning

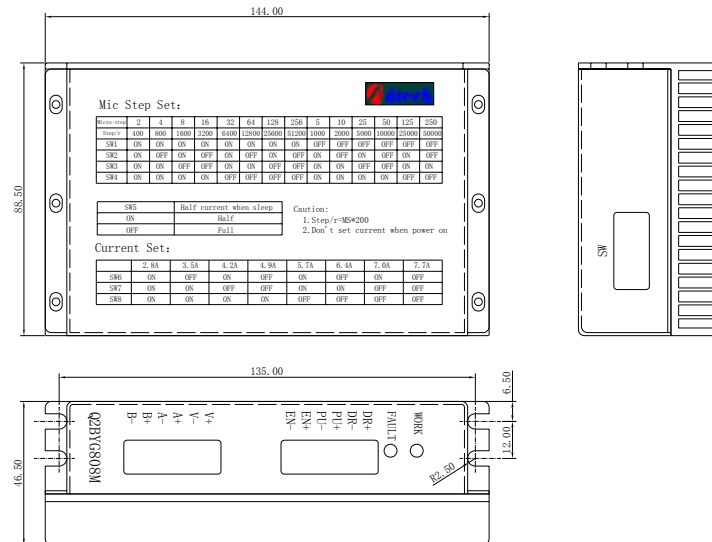
The property right in work regarding all the contents of this manual is owned by Adtech (Shenzhen) Technology Co., LTD (hereinafter referred to as Adtech), without the permission of Adtech, any company or individual is not allowed to imitate, copy, reproduce or translate this manual. Our company makes no warranty, express representation or other imply regarding the contents of this manual. Adtech and its employees assume no responsibility for any direct or indirect information disclosure, benefit loss or business termination due to this manual or the products information described in it. In addition, the products and their information described in this manual are only for the purpose of reference, we reserve the right to amend the manual without prior notice.

All Rights Reserved, Reprint Not Allowed .

Adtech (Shenzhen) Technology Co., LTD

Q2BYG808M 2-phase step driver equal angle, constant torque and highly subdivision, which are suitable for drive large and middle hybrid 2-phase step motor with 4,6 and 8 wires; The driver adopt new series bipolar constant current technology, subdivision function makes the motor running improved, low vibration high precision and decrease. Exquisite shapes, good design and stability features, it belongs to desirable step driver.

1. Install Size



2. Main Features

- ☆ Be able to drive two-phase composite 56, 85 and 86 series stepper motor with four, six and eight wires;
- ☆ DC power supply, with voltage scope 40v-80v;
- ☆ Bipolar constant current chopping, with a chopping frequency of 20KHz;
- ☆ Photoelectric Isolation signal input, signal compatible with TTL;

- ☆ Auto current reduction in static state, maximum drive current 8A/phase;
- ☆ Optional subdivision precisions with maximum subdivision of 256.
- ☆ Parameter shows shell,, dial up switch set for conveniently testing and maintenance;
- ☆ Outline dimension L 144×88.5×46.5 (mm)
- ☆ Single/double pulse control mode for user selection.

3. Application

Sealing & cutting machine、Shearing machine、Pipe cutting machine、Glass cutting machine、pack cutting machine、packaging & printing machine、CNC milling & drilling machine、drilling & brush making machine、Engraving machine、spring machine、Winding machine、Mortiser、blow-and blow machine etc. for precision positioning system。

4. Using Environment & parameters

Cool Mode		Nature wind cooling
Saving Temperature		-20℃~70℃
Weight		367 克
Environment	Temperature	-5℃~50℃
	Humidity	35%~90%
	Vibration	5.9m/s ² Max
	Work environment	To be Avoid oil mist, metallic dust and corrosive gas

5. Electronic Features (Tj=25℃)

Project Specification	Q2BYG808M		
	Max Value	Max Value	Unit
Work Voltage (DC)	40	80	V (DC)
Output current (phase)	2.8	7.7	A
Step Pulse frequency	0	300	KHZ
Insulation Resistance	500	∞	MΩ

6. Pin specification

Name	Mark	Function details
------	------	------------------

Working Power	-	DC(40V~80V)	DC power supply
	+		
Port of connect Motor	A+		Step motor A Phase
	A-		
	B+		Step Motor B phase
	B-		
Enable signal	EN+		Enable signal : The signal used for Enable/disable. Enable upon high level enable, the driver can not work in low level; suspend if not used.
	EN-		
Pulse Signal	PU-		Pulse signal: it is pulse control signal in single pulse control mode and forward stepping pulse signal in double- pulse control mode, the input signal pulse is in edge valid mode.
	PU+		
Direction signal	DR+		Direction signal: It is high/low level signal in single pulse control mode and reverse pulse signal in double-pulse control mode. The input signal pulse is in edge valid mode.
	DR-		
Fault indication	FAULT		Power on is normal, indication light off
Work indication	POWER		Power on working normal, Indication is on

7. Work Power

Work voltage of power between DC (40V-80V) is belonging to normal work, which are including related mark specification and parameters for compatible transformer and current plate. User must connect according to the request, as well as you can adopt other DC stabilized voltage supply. The wave of power is under 50mc, to be avoiding unstable supply power grid.

8. Subdivision and work current Setting

Current setting: Q2BYG808M

Current	2.8A	3.5A	4.2A	4.9A	5.7A	6.4A	7.0A	7.7A
SW6	ON	OFF	ON	OFF	ON	OFF	ON	OFF
SW7	ON	ON	OFF	OFF	ON	ON	OFF	OFF
SW8	ON	ON	ON	ON	OFF	OFF	OFF	OFF
SW5	ON : Half current OFF: Full current Semi-current state when motionless							

Subdivision:

Type 一:

Subdivision No.	2	4	8	16	32	64	128	256
Step/rotation	400	800	1600	3200	6400	12800	25600	51200
SW1	ON	ON	ON	ON	ON	ON	ON	ON
SW2	ON	OFF	ON	OFF	ON	OFF	ON	OFF
SW3	ON	ON	OFF	OFF	ON	ON	OFF	OFF
SW4	ON	ON	ON	ON	OFF	OFF	OFF	OFF

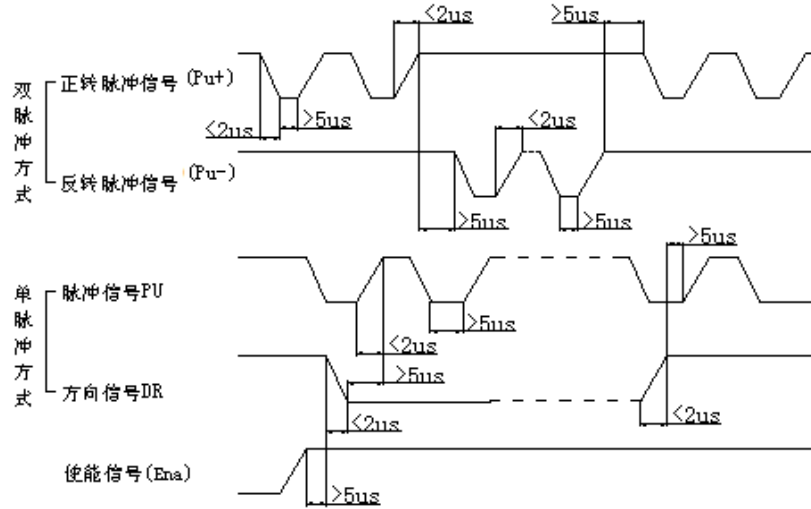
Type 二:

Subdivision No.	5	10	25	50	125	250
Step/Rotation	1000	2000	5000	10000	25000	50000
SW1	OFF	OFF	OFF	OFF	OFF	OFF
SW2	ON	OFF	ON	OFF	ON	OFF
SW3	ON	ON	OFF	OFF	ON	ON
SW4	ON	ON	ON	ON	OFF	OFF

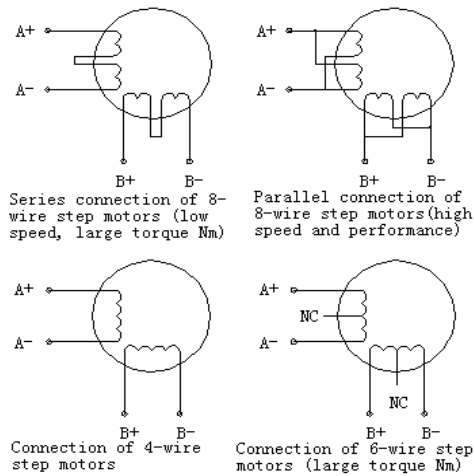
Specification:

The Driver Provides two control modes: double pulse (P+P) and single pulse (P+D), User can setting on/off in the plate of driver conveniently according to output signal mode of controller.

9. Input signal wave shape and Sequence



☆ Q2BYG808M can drive 2-phase hybrid step motor of 4, 6 and 8 wires for all current under 6A/8A, details as below:

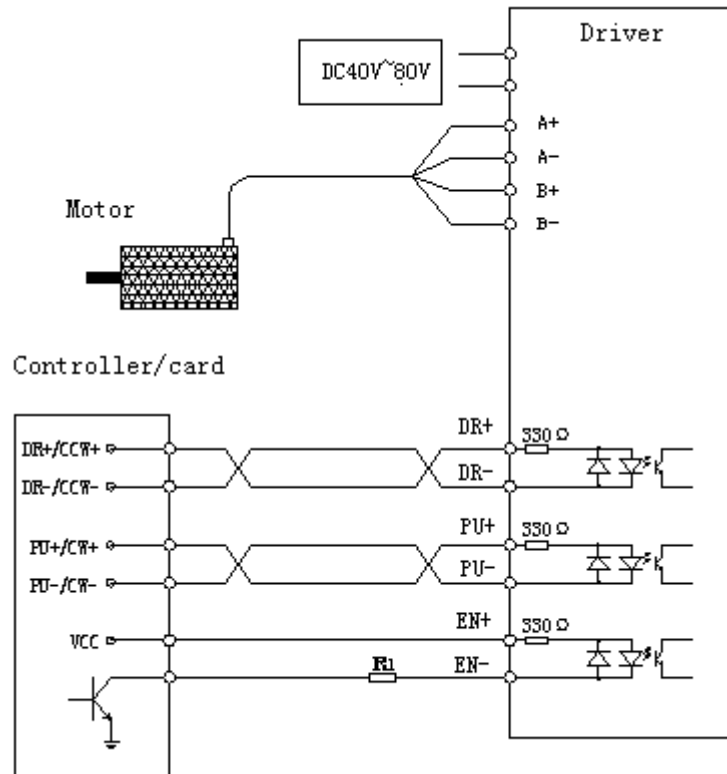


☆ Motor Selection & Driver Features:

- A. According to the speed request of system make choose for selecting step motor or servo motor. The step motor frequency torque will as the motor speed increase, and output torque will decrease. In generally for light load, the maximum working speed about 15 rotations per second; under the heavy load, the maximum working speed is 15 rotations per second. If the system has higher speed request, you can used servo motor. per second
- B After confirmed the model of step motor, select available torque based on the load big or small.
- C In the running, you can change the gear ratio according the gearbox, and it can adjust the relationship for torque and load.
- D Increase the power supply for step drive can improving working speed of motor; Increase the working current can improving the torque; increase the subdivision can improving precision of motor, as well as make the motor running stably, decrease the libration and noise
- E When the Step motor working with low speed, which will resonance with machine sometimes, User have to trip off this speed phase.

11. Wiring of driver

A whole set of control system are including controller, driver, step motor, DC working supply as below:



12. Matters need attention

Please read the User manual before you use the driver

Please connect wire as request, avoid power not stably and be sure not connect against working supply

Working current setting are 1.2 time of motor rated current

If the motor working 30~50 minutes, the temperature high continues, increase the current

In generally, 8 wires motor higher speed of parallel connection than series connection. Torque bigger in series connection than parallel

Be not sure to adjust current or subdivision power on/off when in the running

Driver can be install in the place of dry and ventilation for conveniently extend the using life

Be avoid to frequency power on/off working power acute vibration

The input voltage of control parts (like PLC controller) connect driver, +24VDC must parallel 2K resistance, +12VDC must parallel 1K resistance